FEB 82/REV 2
EK-RLV12-CG-002

RLV12 Disk Controller Configuration Sheet

The RLV12 is a RL01/RL02 cartridge disk drive controller contained on one quad-height multilayer module (M8061). The RLV12 may reside in any quad- or hex-size 16-, 18-, or 22-bit LSI-11 backplane and can support up to four RL01/RL02 disk drives in any combination.

The RLV12 transfers data to and from the LSI-11 bus using direct memory access (DMA) techniques. This allows data transfers to occur, without processor intervention.

The RLV12 contains the following features.

- Single quad-height module requiring no C-D interconnect.
- Supports DMA data transfers in 16-, 18-, or 22-bit addressing modes.
- Software compatible with RLV11 controller in 16- or 18-bit mode.
- Factory configured to support 22-bit addressing with a backplane such as the H9275-A.
- Controls from one to four RL01/RL02 drives.
- Memory parity error abort feature for use with memories that have a parity detect option.

Table 1 FACTORY CONFIGURATION

FUNCTION	DESCRIPTION	JUMPER CONFIGURATION
MEMORY PARITY ERROR ABORT	ENABLE ABORT*	NO JUMPER BETWEEN M23 TO M24 INSTALL JUMPER BETWEEN M24 TO M25
	DISABLE ABORT	INSTALL JUMPER BETWEEN M23 TO M24 NO JUMPER BETWEEN M24 TO M25
VCO CLOCK	ENABLE*	INSTALL JUMPER BETWEEN M26 TO M27
CRYSTAL CLOCK	ENABLE*	INSTALL JUMPER BETWEEN M28 TO M29
STANDARD DEVICE ADDRESS	16 BIT = 174400 OR 18 BIT = 774400	NO JUMPER BETWEEN M1 TO M2 INSTALL JUMPER BETWEEN M17 TO M20 INSTALL JUMPER BETWEEN M21 TO M22 INSTALL JUMPER BETWEEN M20 TO M21
	22 BIT = 17774400*	INSTALL JUMPER BETWEEN M1 TO M2 INSTALL JUMPER BETWEEN M11 TO M12 INSTALL JUMPER BETWEEN M17 TO M20 INSTALL JUMPER BETWEEN M21 TO M22 INSTALL JUMPER BETWEEN M20 TO M21
STANDARD VECTOR ADDRESS	160*	INSTALL JUMPER BETWEEN M3 TO M6 INSTALL JUMPER BETWEEN M7 TO M8 INSTALL JUMPER BETWEEN M6 TO M7

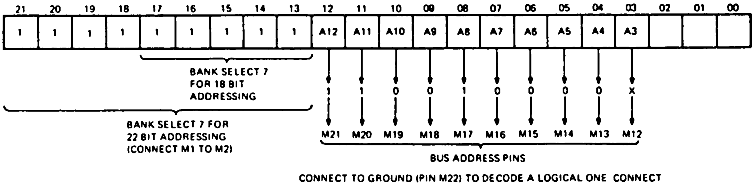
*FACTORY CONFIGURATION

Table 2 STANDARD REGISTER ASSIGNMENTS

REGISTER NAME	ADDRESS		
	16 BIT	18 BIT	22 BIT
CONTROL/STATUS	174400	774400	17774400
BUS ADDRESS	174402	774402	17774402
DISK ADDRESS	174404	774404	17774404
MULTI PURPOSE	174406	774406	17774406
BUS ADDRESS EXTENSION			17774410
RESERVED 1			17774412
RESERVED 2			17774414
RESERVED 3			17774416

CONFIGURABLE RANGES	16 BIT MODE	18 BIT MODE	22 BIT MODE
ADDRESS	160000-177770	760000-777770	17760000-17777760
VECTOR	0-774	0-774	0-774

Figure 1 ADDRESS CONFIGURATION


21 20 19 18 17 16 15 14 13 12 11 10 09 08 07 06 05 04 03 02 01 00
1 1 1 1 1 1 1 1 1 A12 A11 A10 A9 A8 A7 A6 A5 A4 A3
BANK SELECT 7 FOR 18 BIT ADDRESSING
BANK SELECT 7 FOR 22 BIT ADDRESSING (CONNECT M1 TO M2)
1 1 0 0 1 0 0 0 0 X
M21 M20 M19 M18 M17 M16 M15 M14 M13 M12
BUS ADDRESS PINS

CONNECT TO GROUND (PIN M22) TO DECODE A LOGICAL ONE CONNECT TO +5V (PIN M11) FOR A DON'T CARE (X) CONDITION NO CONNECTION DECODES A LOGICAL ZERO

Figure 2 JUMPER LOCATIONS

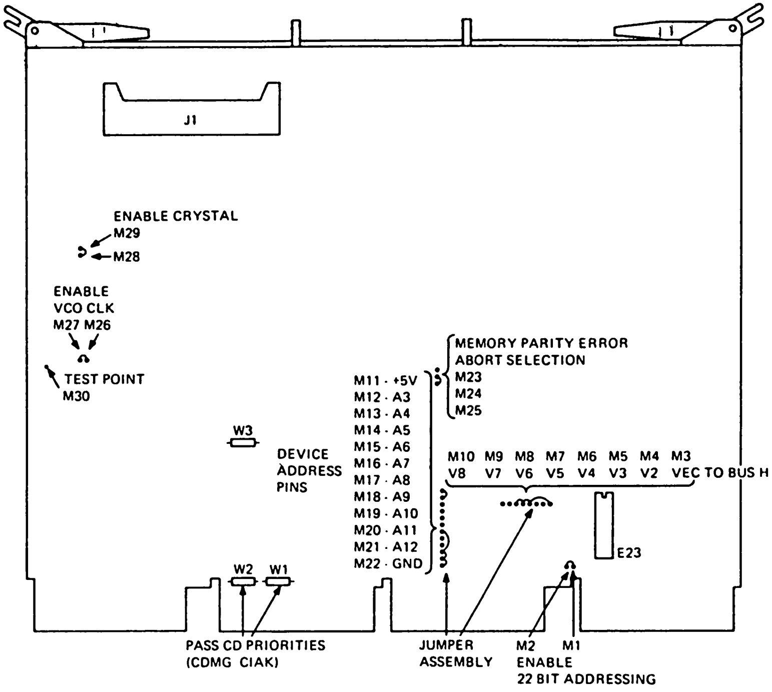
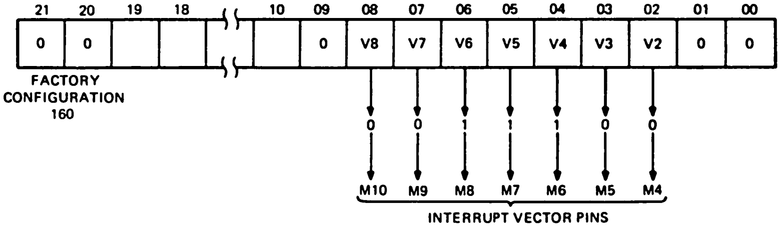


Figure 3 VECTOR CONFIGURATION



CONNECT TO PIN M3 TO DECODE A LOGICAL ONE.
NO CONNECTION DECODES A LOGICAL ZERO.

OPTIONS INCORPORATING THE RLV12

MODEL NUMBER	QTY	COMPONENTS	MODULE NUMBER	DESCRIPTION
RLV12	1	RLV12	M8061	DISK CONTROLLER
RLV22-AK	1	RLV12	M8061	DISK CONTROLLER
	1	RL02-AK		10.4 MB CARTRIDGE DISK DRIVE

NOTE: BC80M CABLE SHIELD SHOULD BE CONNECTED TO CHASSIS GROUND AT BOTH ENDS OF THE CABLE.

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